

REMARKS

Further and favorable reconsideration is respectfully requested in view of the foregoing amendments and following remarks.

Entry of the amendments is proper under 37 CFR §1.116, because the amendments place the application in condition for allowance and do not raise any new issue requiring further search and/or consideration. The amendments are necessary and were not earlier presented, because they are made in response to arguments raised in the final rejection. Entry of the amendments is thus respectfully requested.

Claims 1, 3-5, 7 and 9-10 are pending in this application.

Claims 1, 3, 4 and 7 have been amended to recite a “non-surfactant” phosphoric acid ester compound in order to more clearly define the specific phosphoric acid ester compounds recited in the claims, and to further distinguish the claimed invention over the art. Support for the amendments is clear from the teachings of the specification and the common knowledge in the art, as discussed below.

I. Claim Rejection Under 35 U.S.C. § 103

The Examiner rejects claims 1, 3-5, 7, 9 and 10 under 35 U.S.C. § 103(a) as being unpatentable over Fisher et al. (US 2003/0054160) in view of Fukatani et al. (US 2004/0234778) and Coaker et al. (US 3,841,890). As applied to the amended claims, Applicant respectfully traverses the rejection.

First, it is a common knowledge to those skilled in the art that the specific phosphoric acid ester compounds recited in claim 1 (a trialkyl phosphate, a trialkoxyalkyl phosphate, a triaryl phosphate and an alkyl aryl phosphate) are not surfactants. In order to prove that these specific phosphoric acid ester compounds are not surfactants, Applicant submits herewith excerpts from the book “Function & Application of Surfactants” (published by CMC publishing Co., Ltd. on April 25, 2006) and an English translation as an Exhibit. This book is a very famous general review in the technical field of the present application.

An English translation of Table 1 on page 19 of the book is reproduced below and is found in the attached Exhibit.

Table 1
1. Anionic Surfactant

(4) Phosphate ester type	<p>Alkyl phosphate</p> $\text{RO}-\text{P}(=\text{O})(\text{OM})_2$ $\text{RO}-\text{P}(=\text{O})(\text{OM})_2$	<p>■ (Mono or di)alkyl phosphate ■ (Mono or di)alkyl phosphate ■ (Mono or di)alkyl phosphate [MAP] (in case of mono)</p>	<p>cleaning agent bodyshampoo base</p>
	<p>Polyoxyethylenealkylether phosphate</p> $\text{RO}(\text{CH}_2\text{CH}_2\text{O})_n-\text{P}(=\text{O})(\text{OM})_2$ $\text{RO}(\text{CH}_2\text{CH}_2\text{O})_n-\text{P}(=\text{O})(\text{OM})_2$ $\text{RO}(\text{CH}_2\text{CH}_2\text{O})_n-\text{P}(=\text{O})(\text{OM})_2$	<p>■ Alkylpolyoxyethylene phosphate ■ Alkylether phosphate ■ Alkylpolyethoxy phosphate ■ Polyoxyethylenealkylether phosphate</p>	<p>antistatic agent emulsifying agent dispersing agent</p>
	<p>Polyoxyethylenealkylphenylether phosphate (Abbreviation)</p>	<p>■ Alkylphenylpolyoxyethylene phosphate ■ Alkylphenylether phosphate ■ Alkylphenylpolyethoxy phosphate ■ Polyoxyethylenealkylphenylether phosphate</p>	<p>antistatic agent emulsifying agent dispersing agent antirust</p>

Table 1 provides the following three phosphate ester-type of surfactants: (i) alkyl phosphate, (ii) polyoxyethylenealkylether phosphate, and (iii) polyoxyethylenealkylphenylether phosphate.

In particular, (i) the alkyl phosphate includes monoalkyl phosphate or dialkyl phosphate for use in a cleaning agent, bodyshampoo or base; (ii) the polyoxyethylenealkylether phosphate includes alkylpolyoxyethylene phosphate, alkylether phosphate, alkylpolyethoxy phosphate and polyoxyethylenealkylether phosphate for use in an antistatic agent, emulsifying agent or dispersing agent; and (iii) the polyoxyethylenealkylphenylether phosphate includes alkylphenylpolyoxyethylene phosphate, alkylphenylether phosphate, alkylphenylpolyethoxy phosphate and polyoxyethylenealkylphenylether phosphate for use in an antistatic agent, emulsifying agent, dispersing agent or antirust.

On the other hand, the specifically claimed phosphoric acid ester compounds recited in claim 1 (a trialkyl phosphate, a trialkoxyalkyl phosphate, a triaryl phosphate and an alkyl aryl phosphate) are not disclosed as anionic phosphate ester-type surfactants in the enclosed Exhibit. Therefore, as is commonly known, one of ordinary skill in the art would clearly recognize that these specific phosphoric acid ester compounds are not surfactants.

Second, the Examiner admits that Fisher et al. fail to disclose the use of the claimed phosphoric acid ester compounds (see Office Action of June 24, 2010, page 2, 4th paragraph), but takes the position that Fukutani et al. disclose the use of a phosphate ester compound as a dispersion stabilizer for the dispersion of ITO, ATO, etc. particles in a plasticizer to prevent agglomeration and haze (see the sentence bridging pages 2 and page 3 of the Office Action of December 2, 2010).

However, the specifically claimed phosphoric acid ester compounds recited in claim 1 (a trialkyl phosphate, a trialkoxyalkyl phosphate, a triaryl phosphate and an alkyl aryl phosphate) are clearly not surfactants, and thus are clearly different from the surfactants used in Fukutani et al.

Moreover, paragraph [0096] of Fukutani et al. states:

In order to disperse the ITO fine particles minutely and uniformly in the interlayer film, it is desirable that the plasticized polyvinylacetal resin composition further contains a dispersion stabilizer. The dispersion stabilizer is not particularly restricted and may, for example, include organic or inorganic **surfactant generally employed as dispersion stabilizers for inorganic fine particles**. For example, at least one kind of compound selected from the group consisting of sulfuric ester compound, **phosphate ester compound**, ricinoleic acid, polyricinoleic acid, polycarboxylic acid, a polyhydric alcohol surfactant, polyvinyl alcohol and polyvinyl butyral **is suitably employed**. (Emphasis added).

Accordingly, the phosphate ester compound referred to in the reference is clearly used as a surfactant. Therefore, one of ordinary skill in the art would not have had any reasonable expectation of success of obtaining the color interlayer film for laminated glass of claim 1 from the combination of Fisher et al., Fukutani et al. and Coaker et al.

Third, as taught in the present specification, the penetration resistance of the laminated glass decreases when there is too little plasticizer (see page 10, lines 25-27). Therefore, in the case where the phosphate plasticizer disclosed in Fisher et al., Fukutani et al. and Coaker et al. is used as a dispersion stabilizer in light of the amount used, the penetration resistance of the laminated glass may decrease.

Therefore, a person of ordinary skill in the art to would not have been motivated from the disclosure of Fukutani et al. and Coaker et al. to use of a phosphate ester compound as a dispersion stabilizer for the dispersion of LaB₆, ITO and ATO particles in a plasticizer to prevent agglomeration and haze in the composition of Fisher et al.

Accordingly, claim 1 would not have been obvious over the references.

Claims 3-5, 7, 9 and 10 depend directly or indirectly from claim 1, and thus also would not have been obvious over the references.

Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

II. Conclusion

For these reasons, Applicant takes the position that the presently claimed invention is clearly patentable over the applied references.

Therefore, in view of the foregoing amendments and remarks, it is submitted that the rejection set forth by the Examiner has been overcome, and that the application is in condition for allowance. Such allowance is solicited.

Respectfully submitted,

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Attachment: Function & Application of Surfactants